



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>H04L 1/22 // H04B 131/74</b>	<b>A1</b>	(11) International Publication Number: <b>WO 00/60801</b>
		(43) International Publication Date: 12 October 2000 (12.10.00)

(21) International Application Number: PCT/FI00/00279

(22) International Filing Date: 31 March 2000 (31.03.00)

(30) Priority Data:  
990738 1 April 1999 (01.04.99) FI

(71) Applicant (for all designated States except US): NOKIA NETWORKS OY [FI/FI]; P.O. Box 300, FIN-00045 Nokia Group (FI).

(72) Inventors; and

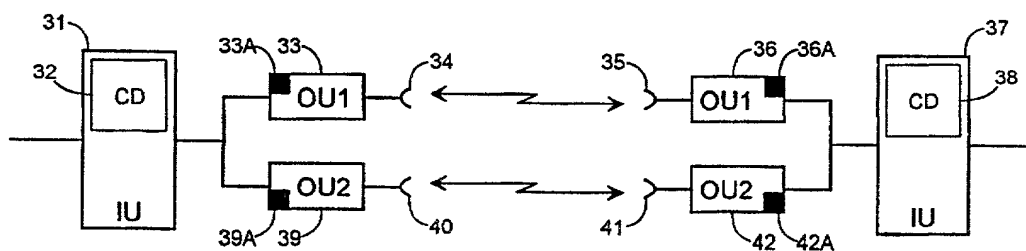
(75) Inventors/Applicants (for US only): LAHTI, Harri [FI/FI]; Hevontie 25 B, FIN-01820 Klaukkala (FI). TORVINEN, Marko [FI/FI]; Kilonpuistonkatu 3 A 16, FIN-02610 Espoo (FI).

(74) Agent: BERGGREN OY AB; P.O. Box 16, FIN-00101 Helsinki (FI).

(81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published***With international search report.**Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.**In English translation (filed in Finnish).*

(54) Title: METHOD AND ARRANGEMENT FOR CHANGING PARALLEL CLOCK SIGNALS IN A DIGITAL DATA TRANSMISSION



## (57) Abstract

A novel changeover arrangement for the clock signals of parallel transmission connections of an assured data transmission link. According to the method of the invention, the transmission path to be received is changed, prior to losing the phase lock, and the data transmission of the link remains free of errors, in case even one of the transmission paths transmits the clock signal as sufficiently free of errors, even if errors occur in the other. This is realised by sending for the transmission paths a clock signal by parallel outdoor units (OU) located in succession to a common indoor unit (IU), by receiving said clock signal by a corresponding set of second outdoor units, where phase locked signals are used for locking to the signal, whereafter a second indoor unit receives information of the mode of the phase lock, as well as by selecting in the receiving indoor unit, on the basis of the mode information obtained from the outdoor unit, a transmission path that has less errors, in case errors are caused in the employed connection. Here also a fading of the clock signal, leading to a disconnection from the phase lock, is considered as an error.